

CLAIMS

Claims 1-5 were previously canceled.

Keep allowed claims 6-11 as previously presented.

Keep claims 13-16, 19, and 21-24 as previously presented.

Claim 17 was previously canceled.

Add new claim 26 that combines objected to claim 15 with claim 12, but excludes the limitation of claim 13, because Naoi et. al. does not teach a port located on the cover.

Add new claim 27 that combines objected to claim 19 with claim 12.

Add new dependent claim 28 that is dependent on new claim 27.

Add new method claim 29, which includes the device of allowed claim 6.

Cancel claim 25.

Amend claims 12, 18 and 20 as follows:

Claims (1-5). (canceled)

Claim 6. (previously presented) A filter device for filtering blood or blood product to remove components of the blood or blood product from the blood or blood product comprising:

a body having a partition wall fixed to the inner periphery of said body, said partition wall dividing said body into a first filter well on the first side of said partition wall, and a second filter well on the second side of said partition wall,

a first filtration media having a first surface and a second surface, comprised of at least one filter element disposed within and sealed to said first filter well to prevent bypass around said first filtration media, with the outer edge of all of the filter elements of said first filtration media disposed below the top of said first filter well,

a second filtration media having a first surface and a second surface, comprised of at least one filter element disposed within and sealed to said second filter well to prevent bypass around said second filtration media, with the outer edge of all of the filter elements of said second filtration media disposed below the top of said second filter well,

a first chamber located between the first surface of said first filtration media and the first side of said partition wall,

a second chamber located between the first surface of said second filtration media and the second side of said partition wall,
with said partition wall containing a through slot, with said through slot being in fluid flow communication with said first chamber, and in fluid flow communication with said second chamber,
an first port leading outside of said device in fluid flow communication with said through slot,
a front cover, sealed with a first seal to the outer periphery of said first filter well,
a back cover, sealed with a second seal to the outer periphery of said second filter well,
a third chamber located between the second surface of said first filtration media and the inside wall side of said front cover,
a fourth chamber located between the second surface of said second filtration media and the inside wall side of said back cover,
a second port leading outside of said device in fluid flow communication with said third chamber,
a third port leading outside of said device in fluid flow communication with said fourth chamber.

Claim 7. (previously presented) The filter device of claim 6 wherein said first port is an inlet port, and wherein said second port is a first outlet port, and wherein said third port is a second outlet port.

Claim 8. (previously presented) The filter device of claim 6 wherein said first port is an outlet port, and wherein said second port is a first inlet port, and wherein said third port is a second inlet port.

Claim 9. (previously presented) The filter device of claim 6 wherein the shape of the outer edge of said first filtration media is the same as the shape of the side wall of said first filter well, thereby providing a means to seal said first filtration media to said first filter well with a compression fit between the outer edge of said first filtration media and the side wall of said first filter well, and wherein the shape of the outer edge of said

second filtration media is the same as the shape of the side wall of said second filter well, thereby providing a means to seal said second filtration media to said second filter well with a compression fit between the outer edge of said second filtration media and the side wall of said second filter well.

Claim 10. (previously presented) The filter device of claim 9 wherein a first filter compression ring is inserted into said first filter well, and wherein the outer periphery of the second surface of said first filtration media is compressed by said first filter compression ring, thereby sealing the second surface of said first filtration media to said first filter well, and wherein a second filter compression ring is inserted into said second filter well, and wherein the outer periphery of the second surface of said second filtration media is compressed by said second filter compression ring, thereby sealing the second surface of said second filtration media to said second filter well.

Claim 11. (previously presented) The filter device of claim 6 wherein said first and said second filtration media are capable of removing leukocytes from blood or blood product.

Claim 12. (currently amended) A filter device for filtering blood or blood product to remove components of the blood or blood product from the blood or blood product comprising:

a body having a partition wall that includes a first surface on one side of said partition wall and a second surface on the other side of said partition wall, with said partition wall fixed to the inner periphery of said body, said partition wall dividing said body into a first filter well on the first surface side of said partition wall, and a second filter well on the second surface side of said partition wall,

a first filtration media including a first surface and a second surface with said first filtration media disposed within and sealed to said first filter well to prevent bypass around said first filtration media, with the outer edge of said first filtration media disposed below the top of said first filter well, with the shape of the outer edge of said first filtration media being the same as the shape of the side wall of said first filter well, thereby providing a means to seal said first

filtration media to said first filter well with a compression fit between the entire outer edge of said first filtration media and the side wall of said first filter well,

a second filtration media including a first surface and a second surface, with said second filtration media disposed within and sealed to said second filter well to prevent bypass around said second filtration media, with the outer edge of said ~~of~~ second filtration media disposed below the top of said second filter well, with the shape of the outer edge of said second filtration media being the same as the shape of the side wall of said second filter well, thereby providing a means to seal said second filtration media to said second filter well with a compression fit between the entire outer edge of said second filtration media and the side wall of said second filter well,

a first chamber located between said first surface of said partition wall and said first surface of said first filtration media,

a second chamber located between said second surface of said partition wall and said first surface of said second filtration media,

a cross port located on said body entirely outside of said first filter well and entirely outside of said second filter well,

a front cover sealed with a first seal to said body, said first seal forming a single closed loop that encloses the outer periphery of said first filter well and a first end of said cross port, thereby creating a third chamber between the inner surface of said front cover and the second surface of said first filtration media, with the first end of said cross port in fluid flow communication with said third chamber,

a back cover sealed with a second seal to said body, said second seal forming a single closed loop that encloses the outer periphery of said second filter well and a second end of said cross port, thereby creating a fourth chamber between the inner surface of said back cover and the second surface of said second filtration media, with the second end of said cross port in fluid flow communication with said fourth chamber,

an first port leading outside of said device in fluid flow communication with said cross port,

an second port leading outside of said device in fluid flow communication with said first chamber, and in fluid flow communication with said second chamber.

Claim 13. (previously presented) The filter device of claim 12 wherein said first port is an inlet port, and wherein said second port is an outlet port.

Claim 14. (previously presented) The filter device of claim 13 wherein said first port is located on said body.

Claim 15. (previously presented) The filter device of claim 13 wherein said first port is located on said front cover.

Claim 16. (previously presented) The filter device of claim 12 wherein said first port is an outlet port, and wherein said second port is an inlet port.

Claim 17. (canceled)

Claim 18. (currently amended) The filter device of claim 12 wherein said first filtration media includes one or more filter elements, and wherein at least one filter element of said first filtration media is sealed to the first filter well with a compression fit between the entire outer edge of said at least one filter element of said first filtration media and the side wall of the first filter well, and wherein said second filtration media includes one or more filter elements, and wherein at least one filter element of said second filtration media is sealed to the second filter well with a compression fit between the entire outer edge of said at least one filter element of said second filtration media and the side wall of the second filter well.

Claim 19. (previously presented) The filter device of claim 12 wherein a first filter compression ring is inserted into said first filter well, and wherein the outer periphery of the second surface of said first filtration media is compressed by said first filter compression ring, thereby sealing the second surface of said first filtration media to said first filter well, and wherein a second filter compression ring is inserted into said second

filter well, and wherein the outer periphery of the second surface of said second filtration media is compressed by said second filter compression ring, thereby sealing the second surface of said second filtration media to said second filter well.

Claim 20. (currently amended) A method of filtering blood or blood product to remove components of the blood or blood product from the blood or blood product comprising:

a) providing a filter device comprising:

a body having a partition wall that includes a first surface on one side of said partition wall and a second surface on the other side of said partition wall, with said partition wall fixed to the inner periphery of said body, said partition wall dividing said body into a first filter well on the first surface side of said partition wall, and a second filter well on the second surface side of said partition wall,

a first filtration media including a first surface and a second surface, with said first filtration media disposed within, and sealed to, said first filter well to prevent bypass around said first filtration media, with the outer edge of said ~~of~~ first filtration media disposed below the top of said first filter well, with the shape of the outer edge of said first filtration media being the same as the shape of the side wall of said first filter well, thereby providing a means to seal said first filtration media to said first filter well with a compression fit between the entire outer edge of said first filtration media and the side wall of said first filter well,

a second filtration media including a first surface and a second surface, with said second filtration media disposed within, and sealed to, said second filter well to prevent bypass around said second filtration media, with the outer edge of said ~~of~~ second filtration media disposed below the top of said second filter well, with the shape of the outer edge of said second filtration media being the same as the shape of the side wall of said second filter well, thereby providing a means to seal said second filtration media to said second filter well with a compression fit between the entire outer edge of said second filtration media and the side wall of said second filter well,

a first chamber located between said first surface of said partition wall and said first surface of said filtration media,

a second chamber located between said second surface of said partition wall and said first surface of said second filtration media,

a cross port located on said body entirely outside of said first filter well and entirely outside of said second filter well,

a front cover sealed with a first seal to said body, said first seal forming a single closed loop that encloses the outer periphery of said first filter well and a first end of said cross port, thereby creating a third chamber between the inner surface of said front cover and the second surface of said first filtration media, with the first end of said cross port in fluid flow communication with said third chamber,

a back cover sealed with a second seal to said body, said second seal forming a single closed loop that encloses the outer periphery of said second filter well and a second end of said cross port, thereby creating a fourth chamber between the inner surface of said back cover and the second surface of said second filtration media, with the second end of said cross port in fluid flow communication with said fourth chamber,

an first port leading outside of said device in fluid flow communication with said cross port,

an second port leading outside of said device in fluid flow communication with said first chamber, and in fluid flow communication with said second chamber,

b) flowing a first portion of the blood or blood product through a first fluid flow path between said first port and said second port, wherein the first fluid flow path includes flowing the blood or blood product through said first filtration media,

c) flowing a second portion of the blood or blood product through a second fluid flow path between said first port and said second port, wherein the second fluid flow path includes flowing the blood or blood product through said second filtration media.

Claim 21. (previously presented) The method of claim 20 wherein said first port is an inlet port, and wherein said second port is an outlet port, and wherein said first fluid flow path flows from said inlet port, through said cross port, through said first filtration media, into said outlet port, and wherein said second fluid flow path flows from said inlet port, through said cross port, through said second filtration media, into said outlet port.

Claim 22. (previously presented) The method of claim 20 wherein said second port is an inlet port, and wherein said first port is an outlet port, and wherein said first fluid flow path flows from said inlet port, through said first filtration media, through said cross port into said outlet port, and wherein said second fluid flow path flows from said inlet port, through said second filtration media, through said cross port into said outlet port.

Claim 23. (previously presented) The filter device of claim 12 wherein the first end of said cross port is in direct fluid flow communication with said third chamber, and wherein the second end of said cross port is in direct fluid flow communication with said fourth chamber.

Claim 24. (previously presented) The method of claim 20 wherein the first end of said cross port is in direct fluid flow communication with said third chamber, and wherein the second end of said cross port is in direct fluid flow communication with said fourth chamber.

Claim 26. (new) A filter device for filtering blood or blood product to remove components of the blood or blood product from the blood or blood product comprising:

a body having a partition wall that includes a first surface on one side of said partition wall and a second surface on the other side of said partition wall, with said partition wall fixed to the inner periphery of said body, said partition wall dividing said body into a first filter well on the first surface side of said partition wall, and a second filter well on the second surface side of said partition wall,

a first filtration media including a first surface and a second surface with said first filtration media disposed within and sealed to said first filter well to prevent bypass around said first filtration media, with the outer edge of said

first filtration media disposed below the top of said first filter well, with the shape of the outer edge of said first filtration media being the same as the shape of the side wall of said first filter well, thereby providing a means to seal said first filtration media to said first filter well with a compression fit between the outer edge of said first filtration media and the side wall of said first filter well,

a second filtration media including a first surface and a second surface, with said second filtration media disposed within and sealed to said second filter well to prevent bypass around said second filtration media, with the outer edge of said second filtration media disposed below the top of said second filter well, with the shape of the outer edge of said second filtration media being the same as the shape of the side wall of said second filter well, thereby providing a means to seal said second filtration media to said second filter well with a compression fit between the outer edge of said second filtration media and the side wall of said second filter well,

a first chamber located between said first surface of said partition wall and said first surface of said first filtration media,

a second chamber located between said second surface of said partition wall and said first surface of said second filtration media,

a cross port located on said body entirely outside of said first filter well and entirely outside of said second filter well,

a front cover sealed with a first seal to said body, said first seal forming a single closed loop that encloses the outer periphery of said first filter well and a first end of said cross port, thereby creating a third chamber between the inner surface of said front cover and the second surface of said first filtration media, with the first end of said cross port in fluid flow communication with said third chamber,

a back cover sealed with a second seal to said body, said second seal forming a single closed loop that encloses the outer periphery of said second filter well and a second end of said cross port, thereby creating a fourth chamber between the inner surface of said back cover and the second surface of said second filtration media, with the second end of said cross port in fluid flow communication with said fourth chamber,

an first port leading outside of said device in fluid flow communication with said cross port, said first port being located on said front cover,

an second port leading outside of said device in fluid flow communication with said first chamber, and in fluid flow communication with said second chamber.

Claim 27. (new) A filter device for filtering blood or blood product to remove components of the blood or blood product from the blood or blood product comprising:

a body having a partition wall that includes a first surface on one side of said partition wall and a second surface on the other side of said partition wall, with said partition wall fixed to the inner periphery of said body, said partition wall dividing said body into a first filter well on the first surface side of said partition wall, and a second filter well on the second surface side of said partition wall,

a first filtration media including a first surface and a second surface with said first filtration media disposed within and sealed to said first filter well to prevent bypass around said first filtration media, with the outer edge of said first filtration media disposed below the top of said first filter well, with the shape of the outer edge of said first filtration media being the same as the shape of the side wall of said first filter well, thereby providing a means to seal said first filtration media to said first filter well with a compression fit between the outer edge of said first filtration media and the side wall of said first filter well,

a second filtration media including a first surface and a second surface, with said second filtration media disposed within and sealed to said second filter well to prevent bypass around said second filtration media, with the outer edge of said second filtration media disposed below the top of said second filter well, with the shape of the outer edge of said second filtration media being the same as the shape of the side wall of said second filter well, thereby providing a means to seal said second filtration media to said second filter well with a compression fit between the outer edge of said second filtration media and the side wall of said second filter well,

with a first filter compression ring inserted into said first filter well, with the outer periphery of the second surface of said first filtration media being compressed by said first filter compression ring, thereby sealing the second

surface of said first filtration media to said first filter well, and with a second filter compression ring inserted into said second filter well, with the outer periphery of the second surface of said second filtration media being compressed by said second filter compression ring, thereby sealing the second surface of said second filtration media to said second filter well,

a first chamber located between said first surface of said partition wall and said first surface of said first filtration media,

a second chamber located between said second surface of said partition wall and said first surface of said second filtration media,

a cross port located on said body entirely outside of said first filter well and entirely outside of said second filter well,

a front cover sealed with a first seal to said body, said first seal forming a single closed loop that encloses the outer periphery of said first filter well and a first end of said cross port, thereby creating a third chamber between the inner surface of said front cover and the second surface of said first filtration media, with the first end of said cross port in fluid flow communication with said third chamber,

a back cover sealed with a second seal to said body, said second seal forming a single closed loop that encloses the outer periphery of said second filter well and a second end of said cross port, thereby creating a fourth chamber between the inner surface of said back cover and the second surface of said second filtration media, with the second end of said cross port in fluid flow communication with said fourth chamber,

a first port leading outside of said device in fluid flow communication with said cross port,

a second port leading outside of said device in fluid flow communication with said first chamber, and in fluid flow communication with said second chamber.

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Claim 28. (new) The filter device of claim 27 wherein said first filter compression ring is an integral part of said front cover, and wherein said second filter compression ring is an integral part of said back cover.

Claim 29. (new) A method of filtering blood or blood product to remove components of the blood or blood product from the blood or blood product comprising:

a) providing a filter device comprising:

a body having a partition wall fixed to the inner periphery of said body, said partition wall dividing said body into a first filter well on the first side of said partition wall, and a second filter well on the second side of said partition wall,

a first filtration media having a first surface and a second surface, comprised of at least one filter element disposed within and sealed to said first filter well to prevent bypass around said first filtration media, with the outer edge of all of the filter elements of said first filtration media disposed below the top of said first filter well,

a second filtration media having a first surface and a second surface, comprised of at least one filter element disposed within and sealed to said second filter well to prevent bypass around said second filtration media, with the outer edge of all of the filter elements of said second filtration media disposed below the top of said second filter well,

a first chamber located between the first surface of said first filtration media and the first side of said partition wall,

a second chamber located between the first surface of said second filtration media and the second side of said partition wall,

with said partition wall containing a through slot, with said through slot being in fluid flow communication with said first chamber, and in fluid flow communication with said second chamber,

an first port leading outside of said device in fluid flow communication with said through slot,

a front cover, sealed with a first seal to the outer periphery of said first filter well,

a back cover, sealed with a second seal to the outer periphery of said second filter well,

a third chamber located between the second surface of said first filtration media and the inside wall side of said front cover,

a fourth chamber located between the second surface of said second filtration media and the inside wall side of said back cover,
a second port leading outside of said device in fluid flow communication with said third chamber,
a third port leading outside of said device in fluid flow communication with said fourth chamber,

b) flowing a first portion of the blood or blood product through a first fluid flow path between said first port and said second port, wherein the first fluid flow path includes flowing the blood or blood product through said first filtration media,

c) flowing a second portion of the blood or blood product through a second fluid flow path between said first port and said third port, wherein the second fluid flow path includes flowing the blood or blood product through said second filtration media.